

REMARKS

In response to the final Office Action mailed April 28, 2008, Claim 13 has been amended to address the 35 U.S.C. 112, second paragraph rejection below. Claim 22 has been amended to correct an informal error. Dependent claim 14 has been canceled and independent Claim 12 has been amended to incorporate the limitations of dependent claim 14. Applicant respectfully submits that this Amendment After Final Rejection places this application in condition for allowance by amending the claims in a manner that is believed to render the pending claims allowable over the cited art and/or at least place this application in better form for appeal. This Amendment was not presented earlier because Applicant believed that the prior response placed this application in condition for allowance for at least the reasons discussed in the prior response. Accordingly, entry of the present Amendment, as an earnest attempt to advance prosecution and/or to reduce the number of issues, is respectfully requested under 37 C.F.R. §1.116. No additional searching or examination effort is deemed necessary by this amendment since the limitations were all previously presented. Further, Applicant respectfully requests allowance of the present application in view of the foregoing amendment and remarks.

**1. 35 U.S.C. 112 rejections**

Claim 13 was rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner noted that the term “actuating arrangement” lacked antecedent basis in Claim 13. Applicant has amended Claim 13 accordingly in this paper.

**2. 35 U.S.C. 102(b) rejections**

a. Claims 12-14 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,893,984 to Davison et al. (Davison).

i. Independent Claim 12

Dependent claim 14 has been canceled and independent Claim 12 has been amended to incorporate the limitations of dependent claim 14. As a result, independent Claim 12 now requires that the “discharge passage has a throttle element” and that “a feeding opening of the feed passage is radially further on the inside than an outlet opening of the discharge passage (having a throttle element).”

Per 2131, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal*

*Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Applicant submits that independent Claim 12 is not anticipated by Davison because Davison fails to expressly or inherently describe “a feeding opening of a feed passage radially further on the inside than an outlet opening of [a] discharge passage (having a throttle element)” as claimed.

In rejecting independent Claim 12, the Examiner contended that Fig. 3 of Davison defines a discharge passage arranged in the rotor for discharging a fluid “between the roots of [the] blades in the turbine section.” However, in Claim 14, the Examiner also contended that element 60 (holes 60) in Fig. 2 of Davison define a discharge passage having a throttle element. *See* pp. 3-4 of the April 28, 2008 Office Action. If, as the Examiner contends, a feed passage is defined from 56 to 60 and element 60 defines a discharge passage having a throttle element, then the discharge passage having a throttle element of Davison (holes 60) lie radially further on the inside (closer to the rotor shaft 22) than the feed passage (56 to 60). In contrast, the claimed invention requires “a feeding opening of the feed passage radially further on the inside than an outlet opening of [a] discharge passage (having a throttle element).” Accordingly, Davison fails to anticipate independent Claim 12 as amended and Applicant respectfully requests withdrawal of the rejection of independent Claim 12 under 35 U.S.C. 102(b).

ii. Dependent claim 13

Dependent claim 13 requires “an actuating arrangement for influencing the fluid flow... connected to the discharge passage via a gap formed between moving-blade wheels and an element projecting axially through the rotor shaft.” In the April 28, 2008 Office Action, the Examiner simply concluded that Davison discloses the limitations of dependent claim 13 without any reasoning or support whatsoever for the rejection. This runs counter to the goal of examination, which, per MPEP 706, is to “clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity.” (Emphasis added). Thus, Applicant first respectfully submits that the Examiner has not yet provided a *prima facie* case of anticipation for dependent Claim 13. Further, Applicant submits that dependent claim 13 provides further reasons for allowance because Davison is wholly silent as to “an actuating arrangement for influencing the fluid flow... connected to [a] discharge passage via a gap formed between

moving-blade wheels.” No such actuating arrangement is found in Davison. In addition, Davison does not inherently or expressly describe an element projecting axially through its rotor shaft 22 as required in dependent claim 13. *See e.g.* Figs. 2 and 3 of Davison, which do not show an element projecting axially through rotor shaft 22. In view of the above, dependent claim 13 provides further reasons for allowance.

b. Claim 20 was rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,525,032 to Kreis et al. (Kreis).

i. Independent Claim 20

Claim 20 requires “[a] method of heating a rotor of a turbo-machine having a compressor, comprising flowing a fluid for heating the rotor flows through the turbo-machine rotor during a start-up operation carried out before the load operation of the turbo-machine, and preventing a fluid flow through the rotor during the load operation of the turbo-machine.” According to the Examiner, at col. 1, lines 50-67, Kreis discloses “flowing a fluid for heating the rotor through the rotor during a start-up operation carried out before the load operation of the turbo-machine, and preventing a fluid flow through the rotor during the load operation of the turbo-machine.” via valves 19, 20 of Kreis that are capable of controlling the flow of coolant through the rotor at any desired time or based on another input. *See* page 4 of the April 28, 2008 Office Action. Applicant respectfully disagrees with the Examiner’s position.

Applicant submits that Kreis is wholly silent as to the limitations of independent Claim 20 and thus fails to anticipate independent Claim 20. Per 2131, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). (Emphasis added). While Kreis states that “the shaft is conditioned by means of a system of internal conduits with a hot or cold medium,” Kreis is wholly silent as to when the use of the hot or cold medium takes place. *See* col. 1, lines 49-59 of Kreis. As a result, Kreis does not inherently or expressly describe “flowing a fluid for heating the rotor...during a start-up operation carried out before the load operation of the turbo-machine...” nor “preventing a fluid flow through the rotor during the load operation of the turbo-machine.” For this reason alone, independent Claim 20 is in condition for allowance. Moreover, the fact that valves 19, 20 of Kreis that are capable of controlling the flow of a fluid through the rotor at any desired time or based on another input is insufficient to establish

anticipation of independent Claim 20. *See Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ 1746, 1749 (Fed. Cir. 1991): “The fact that a prior art reference is capable of being modified and the modification would anticipate the invention is not sufficient to support anticipation based on inherency.” (Emphasis added). In view of the above, Kreis fails to anticipate independent Claim 20 and Applicant respectfully requests withdrawal of the rejection of independent Claim 20 under 35 U.S.C. 102(b).

2. **35 U.S.C. 103(a) rejections**

a. Claims 15-17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Davison in view of U.S. Patent No. 6,382,903 to Caruso et al.

i. **Dependent claims 15-17**

Dependent claims 15-17 each include the limitations of independent Claim 12. For the reasons set forth above with respect to independent Claim 12, dependent claims 15-17 are in condition for allowance.

b. Claims 18-19 and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kreis in view of U.S. Patent No. 6,382,903 to Goldberg (Goldberg).

i. **Independent Claim 18**

Independent Claim 18 requires “[a] method of cooling a rotor of a turbo-machine having a compressor, comprising: flowing a cooling flow through the rotor of the turbo-machine during a rotary operation following a load operation of the turbo-machine, wherein said flowing comprises opening a feed passage when the speed of the rotor is below a predetermined value.” Applicant submits that independent Claim 18 is in condition for allowance because Kreis and Goldberg, even if combined, fail to teach or suggest “opening a feed passage when the speed of the rotor is below a predetermined value.”

Section 2143.03 of the MPEP requires the “consideration” of every claim element in an obviousness determination. To render independent Claim 18 unpatentable, however, the Office must do more than merely “consider” each and every element for this claim. Instead, the asserted combination of Kreis and Goldberg must also teach or suggest each and every claim element. *See In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (emphasis added) (to establish prima facie obviousness of a claimed invention, all the claim elements must be taught or suggested by the prior art). As the Board of Patent Appeals and Interferences has recently confirmed, a proper obviousness determination requires that an Examiner make “a searching

comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” See *In re Wada and Murphy*, Appeal 2007-3733, citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Further, it remains well-settled law that obviousness requires at least a suggestion of all of the elements in a claim. See *In re Wada and Murphy*, citing *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) and *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)) (emphasis added). In the present application, the combination of Kreis and Goldberg does not teach or suggest all the elements of independent Claim 18.

The Examiner admits that Kreis does not disclose “opening a feed passage when the speed of the rotor is below a predetermined value” as claimed, but contends Goldberg’s teaching of using speed sensors (30) for the purpose of controlling a turbine fill in the deficiencies of Kreis. See page 6 of the April 28, 2008 Office Action. However, while the speed sensors 30 of Goldberg may sense the speed of the rotor 28 (see col. 3, lines 39-43 of Goldberg), this general disclosure in Goldberg fails to specifically teach or suggest “opening a feed passage when the sensor 30 senses that the speed of the rotor is below a predetermined value.” Therefore, the combination of Kreis and Goldberg do not teach or suggest all the claim limitations of independent Claim 18 as is required to establish a *prima facie* case of obviousness. In view of the above, the combination of Kreis and Goldberg does not support a *prima facie* case of obviousness against independent Claim 18 and Applicant respectfully requests withdrawal of the rejection of independent Claim 18 under 35 U.S.C. 102(b).

ii. Dependent Claim 19

Dependent claim 19 is dependent on independent Claim 18. For the reasons set forth with respect to independent Claim 18, dependent Claim 19 is in condition for allowance.

iii. Dependent Claim 22

Dependent claim 22 requires that the fluid flow of the turbo-machine of independent Claim 12 is influenced by a shutoff element that is actuated as a function of a speed of the rotor shaft. Again, the Examiner provides no reasoning or support for the rejection of dependent Claim 12 except that “[r]egarding claim 22, the modified apparatus of Kreis et al. disclose all of the claimed limitations in claim 18 above.” Applicant thus submits that the Examiner has not provided a *prima facie* case of anticipation as to dependent claim 22. Further, while Goldberg discloses that speed sensors 30 may sense the speed of the rotor 28 (see col. 3, lines 39-43 of Goldberg), nothing in the combination of Kreis and Goldberg teaches or suggests “a shutoff

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element that is actuated as a function of a speed of the rotor shaft." Accordingly, dependent claim 22 provides further reasons for allowance.

Conclusion

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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